

WHAT IS CLAIMED IS:

1. A bone plate assembly, comprising:
a bone plate including first and second extending portions defining an angle therebetween, each of said first and second portions having at least one hole therein; and
a screw extending through a said hole in one of said first and second portions, said screw threadingly engaging another said hole in the other of said first and second portions, wherein said screw spans said angle between said first and second portions.
2. The bone plate assembly of Claim 1, wherein said first and second portions are placed in slight compression by said threaded engagement between said screw and said hole in said second portion.
3. The bone plate assembly of Claim 1, wherein said first portion is an elongate plate portion having a plurality of said holes therein, and said second portion is an elongate blade portion.
4. The bone plate assembly of Claim 3, wherein said screw extends through a hole in said plate portion, and engages a hole in said blade portion, wherein said screw extends through said plate portion to engage said hole in said blade portion.
5. The bone plate assembly of Claim 4, wherein said hole in said blade portion includes a ledge about at least a portion of the periphery thereof, said screw threadingly engaging said ledge.
6. A bone plate, comprising:
a plate portion and a blade portion extending from one another at an angle and connected to one another at a bend, said bend having a radius defined intermediate said plate portion and said blade portion, said radius dimensioned such that, with said plate portion resting against an outer surface of a bone and said blade portion extending into the bone, said radius fits closely adjacent the outside surface of the bone.
7. The bone plate of Claim 6, wherein said radius is about 0.25 inches or less.
8. A method of designing a blade plate from at least one sample bone such that the bone plate conforms to the outer surface of the bone, comprising:
taking a plurality of measurements of the bone surface;
generating one of a three-dimensional model and a three-dimensional map of the bone surface; and

determining the shape of the bone plate to conform to one of the three-dimensional model and three dimensional map.

9. A bone plate assembly, comprising:

an elongate plate portion disposed in a plane, said plate portion including first and second holes disposed closely adjacent one another, said first hole disposed through said plate portion at an angle relative to said plane and said second hole disposed through said plate portion substantially perpendicular to said plane; and

first and second screws each having a head, said first and second screws respectively disposed through said first and second holes, said head of said second screw positioned to prevent removal of said first screw from said plate portion.

10. The bone plate of Claim 9, wherein said plate portion includes a recess therein which encompasses at least a portion of each of said first and second holes.

11. The bone plate of Claim 9, wherein said head of said second screw abuts said head of said first screw to prevent withdrawal of said first screw outwardly of said plate portion.

12. The bone plate of Claim 9, wherein said heads of said screws are at least partially disposed within said recess.

13. A bone plate assembly, comprising:

a bone plate having elongate plate and blade portions connected to one another at a bend and disposed at an angle with respect to one another, said plate portion having a first hole therein and a second hole therein which is disposed intermediate said first hole and said bend;

a strut screw disposed through said first hole and extending toward said blade portion;

a top screw disposed through said second hole, said top screw extending angularly to one side of said strut screw.

14. The bone plate assembly of Claim 13, wherein said second hole includes first and second counterbores extending into opposite sides of said plate portion about said second hole, said first and second counterbores allowing said top screw to be disposed through said second hole in a plurality of different angular positions with respect to said plate portion.

15. The bone plate assembly of Claim 13, further comprising:

a third hole disposed intermediate said first and second holes; and
another top screw disposed through said third hole, said another top screw
extending angularly to another side of said strut screw opposite said first side.

16. The bone plate assembly of Claim 13, wherein said blade portion includes a
hole therein through which said strut screw is threadedly engaged.

17. A kit, comprising:

a chisel having an elongate blade portion; and

a chisel and drill guide member, the chisel and drill guide member having a
first channel therethrough, said first channel dimensioned to receive said chisel.

18. The kit of Claim 17, wherein said first channel includes a first key element
and said chisel includes a second key element, said first and said second key elements
engaging one another when said chisel is received within said first channel.

19. The kit of Claim 17, wherein said channel and said chisel are cooperatively
dimensioned such that said chisel may only be received through said channel according to a
single orientation.

20. The kit of Claim 17, wherein said chisel and drill guide member further
includes a chamfer slot therein, said chamfer slot disposed at an angle relative to said first
channel and extending through said chisel and drill guide member to meet said first channel.

21. The kit of Claim 17, wherein said chisel and drill guide member further
includes at least one second channel therethrough and disposed parallel to said first channel,
said kit further including a guide wire disposed through one of said at least one second
channels.

22. A kit, comprising:

a drill guide insert; and

a chisel and drill guide member, the chisel and drill guide member having a
first channel therethrough, said first channel dimensioned to receive said drill guide insert.

23. The kit of Claim 22, wherein said first channel includes a first key element
and said drill guide insert includes a second key element, said first and said second key
elements engaging one another when said drill guide insert is received within said first
channel.

24. The kit of Claim 22, wherein said channel and said chisel are cooperatively dimensioned such that said chisel may only be received through said channel according to a single orientation.

25. The kit of Claim 22, wherein said drill guide insert includes a plurality of guide bores therein.

26. The kit of Claim 22, wherein said chisel and drill guide member further includes a chamfer slot therein, said chamfer slot disposed at an angle relative to said first channel and extending through said chisel and drill guide member to meet said first channel.

27. The kit of Claim 22, wherein said chisel and drill guide member further includes at least one second channel therethrough and disposed parallel to said first channel, said kit further including a guide wire disposed through one of said at least one second channels.

28. A method, comprising:
providing a chisel and a chisel guide member, the chisel guide member having a channel therethrough dimensioned to receive the chisel, and a chamfer slot extending therethrough to meet the channel, the chamfer slot disposed at an angle with respect to the channel;

locating the chisel guide member against the surface of a bone;
inserting the chisel through the channel in the chisel guide member;
driving the chisel into the bone to form an insertion channel through at least a portion of the bone, the insertion channel defining an opening at the bone surface having a corner portion;

providing a tool;
inserting the tool through the chamfer slot of the chisel guide member; and
removing bone material from the corner portion with the tool to substantially form a chamfer in the edge of the bone at the insertion channel opening.

29. The method of Claim 28, further including, before said inserting step, the additional steps of:

providing a drill guide insert having a plurality of bores therein;
inserting the drill guide insert within the channel;
drilling holes into the bone through each of the drill guide holes; and
removing the drill guide insert from the channel.

30. A kit, comprising:
a bone plate having elongate plate and blade portions disposed at an angle with respect to one another, said plate portion having a plurality of holes therein;
an insertion guide member detachably securable to said plate portion of said bone plate; and
a screw guide detachably securable to said insertion guide member in alignment with one of said plurality of holes in said plate portion.
31. The kit of Claim 30, wherein said screw guide further includes a screw guide member through which a screw may be inserted, said screw guide member disposed at an angle with respect to each of said blade and plate portions.
32. The kit of Claim 31, wherein said screw guide member at least partially extends into said one of said holes in said plate portion.
33. The kit of Claim 30, wherein said screw guide is a strut screw guide, said strut screw guide including a strut screw guide member disposed angularly with respect to each of said blade and said plate portions and through which a strut screw may be inserted, and said kit further includes a strut screw insertable through said strut screw guide member and said one of said holes in said plate portion in a direction toward said blade portion.
34. The kit of Claim 30, wherein said screw guide is a top screw guide, said top screw guide including a top screw guide member disposed angularly with respect to each of said blade and said plate portions and through which a top screw may be inserted, and said kit further includes a top screw insertable through said screw guide member and said one of said holes in said plate portion in a direction disposed angularly with respect to said blade portion.
35. The kit of Claim 30, further including a handle member, said handle member engagable with said screw guide and said insertion guide member for detachably securing said screw guide and said insertion guide member to one another.
36. A kit, comprising:
a bone plate having plate and blade portions disposed at an angle with respect to one another, said plate portion having a long dimension and plurality of holes therein; and
an insertion guide member detachably securable to said plate portion of said bone plate, said insertion guide member having at least one screw guide member integral therewith and through which a screw may be inserted, said screw guide member disposed at an angle with respect to said plate and blade portions.

37. The kit of Claim 36, wherein one of said holes in said bone plate includes threads therein, and said kit further includes a threaded connector engageable with said threads in said hole to detachably secure said insertion guide member to said bone plate.

38. The kit of Claim 36, wherein said screw guide member is a top screw guide member, and said kit further includes a top screw insertable through said top screw guide member and one of said holes in said plate portion in a direction disposed angularly with respect to said blade portion.

39. The kit of Claim 36, further including a strut screw guide member detachably securable to said insertion guide member and through which a strut screw may be inserted.

40. The kit of Claim 39, wherein said strut screw guide member is disposed angularly with respect to each of said blade and said plate portions, and said kit further includes a strut screw insertable through said strut screw guide member and one of said holes in said plate portion in a direction toward said blade portion.